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canada's aerospace

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Of what does this industry consist? Within it are companies concerned with the design, development and manufacture of aircraft, engines, rockets, communications and navigation equipment, simulators, ground support equipment and a whole host of accessories. Taking the industry as a whole, it has about one hundred separate companies, employs about thirty-five thousand people, and produces goods to the value of more than five hundred million dollars per annum. Its exports represent more than 50 per cent of its total production.

An unscientific but useful way of categorizing an aerospace industry is to divide it into five segments: aircraft, engines, space, electronics, and accessories and ground support equipment. The Canadian industry has competence in all of these areas, not only with respect to efficient production facilities and techniques, but also as far as advanced research, design and development are concerned. The aerospace industry is based in large part on advanced technology and the Canadian industry has achieved notable success in many fields based on significant research and development programs.

Let us look briefly at the five areas, not merely to catalogue names and products, but to get the practical "feel" of the nature of the Canadian industry.

It is possible to understand the nature and extent of the Canadian aerospace industry only if one understands first the position of Canada in the world, and second the changing economic structure in Canada.

The two most salient points to make about

the position of Canada in the world are that Canada is a "middle power" and that Canada is a "world trader". When we talk about Canada being a middle power, we mean that we occupy the middle ground between the large, highly developed and industrialized countries and the small countries whose main growth is still ahead of them. When we talk about Canada being a world trader, we mean that we not only are one of the world's great exporters, but also that we are one of the largest markets in the world for all kinds of goods and the largest per capita in the world for manufactured goods. Thus a Canadian who seeks to sell is able to show that his country is equally prepared to buy.

The economic structure of Canada is changing rapidly, not so much by substitution as by addition. The image of Canada as a great repository and store-house of natural resources and primary products is just as true today as it ever was. To this has been added a burgeoning manufacturing sector playing an ever-increasing role in the economy of the nation as a whole, and certain to continue to do so.

The development of Canadian secondary manufacturing was given a great impetus by the necessities of World War II and the problems of reconstruction and rehabilitation thereafter. This was true of the Canadian aerospace industry as well.

The Canadian aerospace industry is an important element in the Canadian economy and is a significant part of Canadian secondary manufacturing. It is a mature industry with a history of successful achievements to look back to with pride, and a number of

challenging opportunities to look forward to with enthusiasm.

With respect to aircraft, the name of de Havilland Aircraft of Canada Limited is synonymous with high performance short-take-off-and-landing aircraft, widely used all over the world in a great variety of roles and missions both military and civilian. To the piston-engined Beavers, Otters and Caribous are now being added the turbine Beavers, Otters and Buffalos. The de Havilland Company is also extensively involved with Douglas Aircraft Corporation in the production of the DC-9. The name of Canadair is associated with the Argus CL-28 anti-submarine patrol aircraft, the CL-44 freighter aircraft, the CF-104, the CL-41 jet trainer and the CL-84 vertical/short-take-off-and-landing aircraft, incorporating the tilt-wing concept. Found Brothers utility freighter aircraft is a new, simple, rugged machine for transporting light freight.

As far as the engines are concerned, a large and diversified industry has existed for many years. United Aircraft of Canada Limited is currently in production on the PT-6 lightweight, free turbine engine. It is also the only source in the world for a very wide range of Pratt and Whitney piston engine spares. Orenda Engines is involved in the development of stationary gas turbine engines, as well as manufacturing under licence, J-85 and J-79 engines.

The avionics or electronics segment of the Canadian Aerospace Industry has extensive experience in the design, development and manufacture of a diversified range of specialized equipment. World famed names and

products include Computing Devices of Canada Limited—navigational devices, Canadian Aviation Electronics—simulators, Canadian Marconi Company—airborne Doppler sensors, Leigh Instruments—accident data recorder systems, Collins Radio—transceivers, and Canadian Westinghouse—WORTAC.

In the fields of accessories and ground support equipment, Canadian companies are active in the production of aircraft seats, fuel cells, hydraulics, fuel controls, power drive equipment, air-conditioning equipment, undercarriages, parachute and safety equipment, aircraft galleys, and many other products.

The Canadian effort in space is confined to a few areas but is extremely active. Aviation Electric, de Havilland, RCA Victor, Bristol Aerojet and Computing Devices all have research and development activities under way. Black Brants, Martlets and Alouettes attest to the active and significant role being played by Canadian industry in this new challenge to men's ingenuity and spirit of adventure.

To meet the requirements of the future, the Canadian aerospace industry has experienced management, inventive and dedicated scientists and engineers, skilled workmen and modern facilities and equipment. To this should be added a history of attachment to matters aeronautical, and a determination to stay in the forefront of the world's aviation industries.

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